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LEAVES 3D

Serial No. 09/770,890

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forwarding said PN-code spread transmission signal and said twice spread payload data signal to an access radio port.

33. (New) The method according to claim 32, wherein said wireless network is a CDMA network.

34. (New) The method according to claim 32, wherein said orthogonal code is a Walsh code.

35. (New) The method according to claim 32, wherein said first spreading step by said PN-code forms a preamble which is prepended to a packet.

36. (New) A method for code division switching at an originating access radio port of a terrestrial wireless network, where said access radio port interfaces with a plurality of terminal users located within one or more microport cells, comprising the steps of:

despread a transmission signal by orthogonal code assignments to recover microport groupings and route said microport groupings accordingly;

directing the transmission signal within the same access node according to the orthogonal code assignment; and

downconverting to an intermediate frequency.

37. (New) A method for code division switching at an originating access radio port of a terrestrial wireless network, where said access radio port interfaces with a plurality of terminal

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

users located within one or more microport cells, comprising the steps of:

despread a transmission signal by orthogonal code assignments to recover microport groupings and route said microport groupings accordingly;

translating the orthogonal code assignments to a packet address identifying a destination microport augmented to identify a destination access node; and

downconverting to an intermediate frequency.

38. (New) A method for code division switching at an originating terminal, said originating terminal being located within a microport cell of a terrestrial wireless network at a given instant in time, where said network interfaces with an access radio port, comprising the steps of:

spreading a transmission signal by a PN-code assigned to an intended receiving port;

inserting an identifier of a few bits for identifying a user;

receiving a transmission signal from an originating terminal user, containing individual user data;

spreading payload data by an orthogonal code;

spreading the orthogonal spread payload data signal by the PN-code identifying the user with payload data; and

forwarding said PN-code spread transmission signal and said twice spread payload data signal to an access radio port.

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

39. (New) The method according to claim 38, wherein said terrestrial wireless network is a CDMA network.

40. (New) The method according to claim 38, wherein said spreading code is a PN-code.

41. (New) The method according to claim 38, wherein said orthogonal code sequence is a Walsh code.

42. (New) The method according to claim 38, wherein said first spreading step by said PN-code forms a preamble which is prepended to a packet.

43. (New) A method for code division switching at an originating access radio port of a terrestrial wireless network, where said access radio port interfaces with a plurality of terminal users located within one or more microport cells, comprising the steps of:

despread a transmission signal by orthogonal code assignments to recover microport groupings and route said microport groupings accordingly;

translating the orthogonal code assignments to a packet address identifying a destination microport augmented to identify a destination access node;

downconverting to an intermediate frequency;

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

placing said despread transmission signal into a packet with said packet address; and

transmitting said packet to an access node for further transmission over a network.

44. (New) The method according to claim 43, wherein said network is a private wireline network.

45. (New) The method according to claim 43, wherein said network is a packet switched network.

46. (New) The method according to claim 43, wherein said terrestrial wireless network is a CDMA network.

47. (New) The method according to claim 44, wherein said private network interfaces with a public network via a routing node.

48. (New) A method for code division switching at a destination access radio port of a terrestrial wireless network, where said access radio port interfaces with a plurality of terminal users located within one or more microport cells, comprising the steps of:

receiving a packet switched transmission signal from an access node via a network;

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

translating a packet address into an orthogonal code sequence;
respread said orthogonal code sequence into a transmission signal at an
intermediate frequency;
upconverting said respread transmission signal; and
transmitting said respread upconverted transmission signal over the air to a
destination terminal user.

49. (New) A method for code division switching at a destination access radio port of a terrestrial wireless network, where said access radio port interfaces with a plurality of terminal users located within one or more microport cells, comprising the steps of:

acquiring a preamble, which has a PN-code;
processing said PN-code to insure synchronization;
sending an acknowledgement; and
receiving payload data.

50. (New) The method according to claim 49, wherein said preamble is acquired using a serial/parallel acquisition circuit.

51. (New) The method according to claim 49, wherein said acknowledgement comprises required adjustments for an orthogonal transmission that follows.

52. (New) The method according to claim 49, wherein said payload data are acquired by dispersing by orthogonal and PN-codes.

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

53. (New) A method for code division switching used for interfacing a terrestrial wireless network with a network, where said wireless network interfaces with a plurality of wireless terminal users, comprising the steps of:

- spreading a transmission signal by a PN-code assigned to an intended receiving port;
- inserting an identifier of a few bits for identifying a user;
- spreading payload data by an orthogonal code;
- spreading the orthogonal spread payload data signal by the PN-code identifying the user with payload data;
- forwarding, at the originating terminal, said PN-code spread transmission signal and said twice spread payload data signal to an access radio port;
- despread, at an originating access radio port, the transmission signal by orthogonal code assignments to recover microport groupings and route said microport groupings accordingly;
- translating, at the originating access radio port, the orthogonal code assignments to a packet address identifying a destination microport augmented to identify a destination access node;
- downconverting, at the originating access radio port, to an intermediate frequency;
- depositing, at the originating access radio port, said despread transmission signal into a packet with said packet address;

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

transmitting, from the originating access radio port, said packet to an originating access node for further transmission over a network;

receiving, at a destination access radio port, said packet switched transmission signal from a destination access node via a core network;

translating a packet address into an orthogonal code sequence;

respreadng said orthogonal code sequence into a transmission signal at an intermediate frequency;

upconverting said resspread transmission signal; and

transmitting said resspread upconverted transmission signal over the air to a destination terminal user.

54. (New) A method for code division switching used for interfacing a terrestrial wireless network with a core network, where said wireless network interfaces with a plurality of wireless terminal users, comprising the steps of:

spreading a transmission signal by a PN-code assigned to an intended receiving port;

inserting an identifier of a few bits for identifying a user;

spreading payload data by an orthogonal code;

spreading the orthogonal spread payload data signal by the PN-code identifying the user with payload data;

forwarding, at the originating terminal, said PN-code spread transmission

Serial No. 09/770,890

Atty. Dkt. No. 03493.00043
IDS 113351

signal and said twice spread payload data signal to an access radio port; despreading, at an originating access radio port, the transmission signal by orthogonal code assignments to recover microport groupings and route said microport groupings accordingly; directing the transmission signal within the same access node according to the orthogonal code assignments; downconverting, at the originating access radio port, to an intermediate frequency; depositing, at the originating access radio port, said despread transmission signal into a packet with said packet address; transmitting, from the originating access radio port, said packet to an originating access node for further transmission over a network; receiving, at a destination access radio port, said packet switched transmission signal from a destination access node via a core network; translating a packet address into an orthogonal code sequence; respreading said orthogonal code sequence into a transmission signal at an intermediate frequency; upconverting said resspread transmission signal; and transmitting said resspread upconverted transmission signal over the air to a destination terminal user.